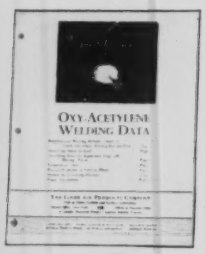
ENGINEERING NEWS-RECORD

Airbase construction—one of many assignments of the Army Engineers.

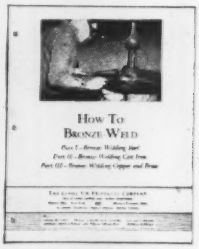
HELPFUL LITERATURE
for Oxy-Acetylene Welding and Cutting Operators

As part of our service to industry, the Linde organization makes available a library of oxy-acetylene process information. A partial list of this "how-to-do-it" literature is shown here. If you need copies of any of the booklets described, you can obtain them from any Linde office, without charge. Please ask for them by Form numbers.



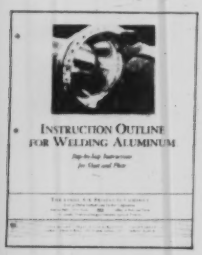
OXY-ACETYLENE WELDING DATA
12 pages—Form 4600

Charts, tables, and recommended welding methods; choice of flame adjustments, welding rod, and flux; methods for identifying metals; physical properties of familiar metals; temperature data chart; and a conversion table for hardness numbers are included in this booklet.



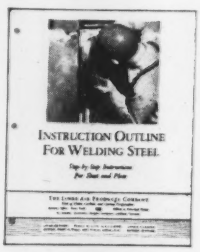
HOW TO BRONZE-WELD
16 pages—Form 4328

This booklet discusses the theory and advantages of bronze-welding, and describes means of step-by-step pictures correct techniques for bronze-welding steel, cast iron, copper and brass. Bronze-welding and hard-surfacing techniques are also shown in pictures of practical applications.



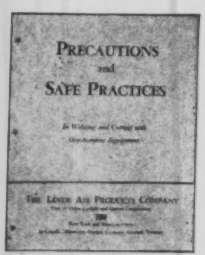
INSTRUCTION OUTLINE FOR WELDING ALUMINUM
8 pages—Form 4538

Instructions for welding aluminum sheet and plate, including the choice of proper flame and rod, the joint design, the use of jigs and supports, and cleaning and fluxing, are given in step-by-step illustrations. How the physical characteristics of aluminum affect welding technique is also discussed.



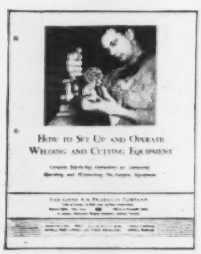
INSTRUCTION OUTLINE FOR WELDING STEEL
20 pages—Form 4645

This is a series of practice exercises ranging from primary melting to making production butt welds in steel sheet and plate. Instructions for blowpipe manipulation, rod deposit, and examples of both good and poor welds, are included for guidance in correcting faulty procedure.



PRECAUTIONS AND SAFE PRACTICES
56 pages—Form 2035

A copy of this booklet should be in the hands of every operator of oxy-acetylene welding and cutting equipment. It completely covers all the safety precautions that should be observed in setting up and operating equipment, in handling calcium carbide and oxygen and acetylene cylinders, and in maintaining equipment.

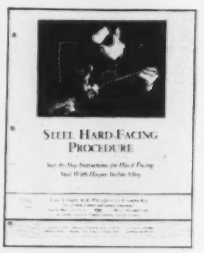


HOW TO SET UP AND OPERATE WELDING AND CUTTING EQUIPMENT
20 pages—Form 5165

Complete, step-by-step illustrated instructions for connecting, operating, and maintaining oxy-acetylene welding and cutting equipment. A careful study of the various suggestions in this booklet will aid all operators in getting the most out of their equipment, and will help to promote safety.

OXY-ACETYLENE HEATING FOR BENDING, STRAIGHTENING, AND FORMING
8 pages—Form 4200

The many applications of the oxy-acetylene flame for "smithing" operations, its use in automotive production and repair, in the boiler shop, and for upsetting and stretching, are reviewed. Three methods for straightening bent shafts are given.



STEEL HARD-FACING PROCEDURE
8 pages—Form 3491

The special instructions given here, based on the general hard-facing procedures, should prove helpful to everyone applying Haynes Stellite alloy to steel surfaces. A chart of hard-facing materials data and a listing of suggested hard-facing applications are also included.

THE LINDE AIR PRODUCTS COMPANY

Unit of Union Carbide and Carbon Corporation

30 E. 42nd St., New York, N. Y. UCC Offices in Principal Cities

In Canada: Dominion Oxygen Company, Limited, Toronto

The words "Haynes Stellite," "Oxweld," "Linde," "Prest-O-Lite," "Union," "Prest-O-Weld," and "Purox" are trade-marks

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The Week In Engineering and Construction

INEERING NEWS-RECORD • APRIL 15, 1943 • VOLUME 130 • NUMBER 15

WPB eases equipment parts; halts scraper production

Controls over new construction machines tightened by amended limitation order, but parts needed for repair to prevent or remedy a breakdown may be obtained.

The War Production Board's order week forbade further production of ral types of scrapers. At the same it lessened the restrictions on the of repair parts for construction pment in order to encourage the use ed equipment. The amendment of equipment order, L-192, also sim- somewhat the distribution of types of equipment.

one may place an order, after 1, under the amended directive, ny under-truck graders, finegraders subgraders of the drawn type, joint lers, carrying and hauling scrapers ver 15 cu.yd. capacity, and drag, no, and rotary scrapers.

rts needed for the repair of an al or imminent breakdown or to tain equipment in sound working ition may now be ordered by any- merely upon certification that they eeded for this purpose and that the ine in question has been registered the used machinery section of B. as required by order L-196. For repair part orders, contractors king on a project that has been ted a priority rating on a P-19 or- may apply the rating to the parts hase.

purchase repair parts for inventory contractor, WPB authorization is ssary. A novel feature of the amended 2 order seeks to ensure that civil- will get some of the parts, rather having the Army snatch them all high ratings, by forbidding manu- urer to accept orders from war agen- for more than 75 percent of their acity if they have civilian orders on d for the other 25 percent of their duction.

s regards other types of new con- ction equipment, the revised order up three classes. Anyone wanting uy equipment on Schedule A must an application with a WPB regional e on form PD-556. Schedule A in- les such machines as: Bulldozers, cranes, crushers, derricks, ditchers, draglines, truck mixers and pavers, power shovels and crawler wagons.

Schedule B consists of equipment that anyone may order without restriction. It includes: Buckets, jack hammer drills, hoists, small mixers, pumps, vibrators, etc.

Finally, equipment included on Schedule C may be produced only for military use. Schedule C includes: Batchers, bins, concrete buggies, road discs, dredgers, concrete road forms, graders, road rollers, etc.

Naval works budget set at $1,870,000,000

The Naval public works budget, submitted to Congress by the President last week, calls for the appropriation of $1,870,000,000. This sum includes $674,634,000 for payments on contracts already made under previously granted contract authorizations. The remainder is for new contracts, including $241,440,000 for contracts still to be placed by virtue of contract authorizations already in effect. Under wartime security rules, no details as to the expenditure of the money are made public. Also included in the Navy budget is $210,000,000 for the cost of the new floating drydocks recently authorized by Congress. These docks (*ENR*, April 8, p. 464), radically different in design from anything used by any other navy, will permit repair of battleships and heavy cruisers anywhere in the world when such repairs are necessary.

Press Association, Inc.

Oil pipe for the Alaska-Canada defense area

Depicted above is the loading of oil pipe at Fort Smith on the Slave River. Ahead lies an 800-mile barge voyage along Canadian rivers and lakes to the Fort Norman oil wells. United States army engineers are carrying out this "Canol Project", covering more than 1,500 miles in the frontier country of northern Canada, to facilitate the transportation of oil for use on the Alaska-Canada defense road system. The pipe line will carry oil from the Fort Norman oil fields across the mountains to Whitehorse. The project includes the transportation of equipment over Alberta railroads, along rivers and through lakes of this difficult country. The barges shown in the picture were brought over a portage to this starting point.

Sanitation construction in Latin America

Public health and sanitation, with all the wide range of activities that such undertakings imply, on a broad continental scale, is now engaging the attention of public officials and health authorities in all of the Latin American republics.

Many nursing schools are under construction or projected to supplement hospitals, clinics, health centers, sanitation facilities in Brazil, Ecuador, Peru, Bolivia, Central America and other countries cooperating in the program.

Nurses, mosquito fighters, sanitary engineers, hospital attendants trained under this program will find plenty of work to do. Thousands of workers moving into rubber-producing areas will need care. Strategic defense areas need more nurses. So do highway de... ments, industries producing strategic ... terials, such as new fiber crops.

The Institute of Inter-American ... fairs, an agency set up by the Offic... the Coordinator of Inter-American ... airs to help carry out the Rio de Ja... conference recommendations on he... and sanitation, is working with the ... American Sanitary Bureau and pri... organizations to recruit public he... workers trained in the most adva... techniques.

• • •

Plan 35 new bridges along Alcan Highway

More than 35 major bridges, 90 ... cent of them of steel construction, ... to be built along the Alcan High... this year, officials of the United St... Public Roads Administration have ... nounced. Some of them will be seve... hundred feet in length.

President Roosevelt has authorized ... National Park Service to assist the ... Department in making a study to ins... orderly development along the Ala... portion of the military highway. It ... expected that the Canadian governm... will make a similar study along ... Canadian portion of the road.

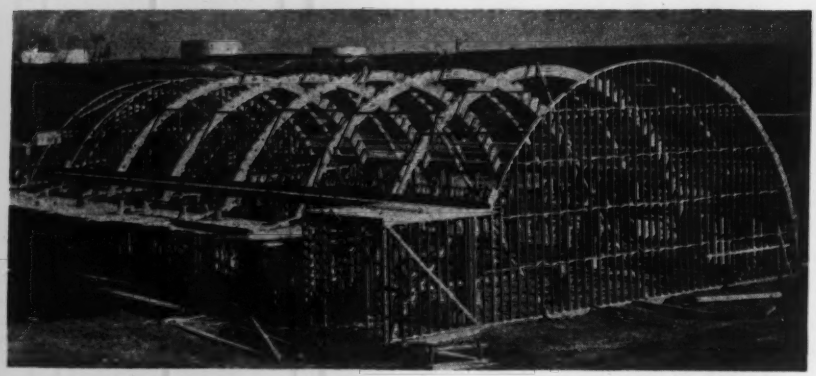
Secretary Ickes has emphasized ... fact that the new route is destined ... mately to become an important tra... artery through a great scenic wild... ness, one that will be of recreatio... importance and will serve the setti... who will follow when the road is open... to public travel.

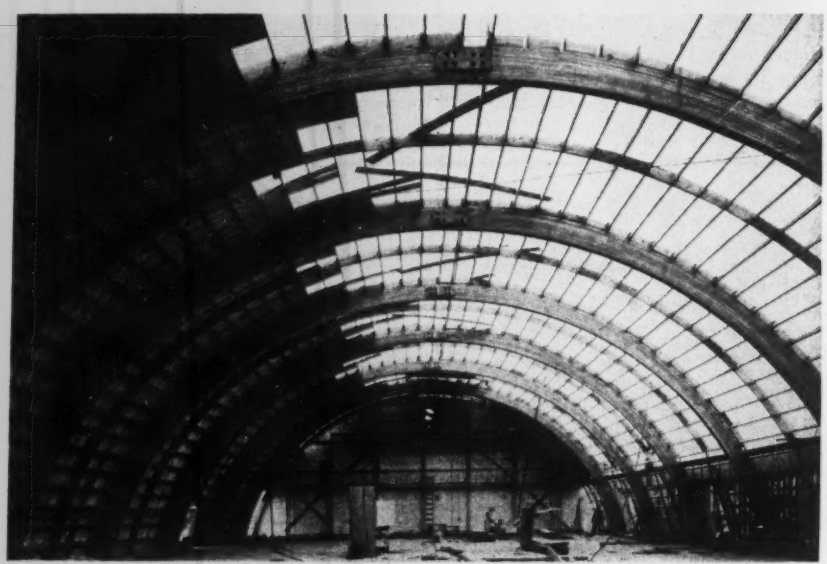
• • •

WPB issues catalog of used materials

The salvage division of the War P... duction Board has published a 72-pa... catalog of available used material ... equipment, which material can be p... chased by contractors and others. T... catalog includes a listing of such ar... cles as derricks, drills, forges, locom... tives, mixers, steamshovels, tanks, tra... formers, engines, hoists, copper wi... and a great many other articles a... machines. In this connection an OPA ... nouncement of April 6 is as follows:

"An alternative ceiling for used m... chinery and second-hand machine pa... which is based, in general, on standa... depreciation rates and allows sellers ... some instances to obtain higher pri... than existing maximums, is now ... nounced by the OPA.





Glued, laminated wood arches for defense projects

Prefabricated structural elements, typical of the changes that have come with designs fitted to a wartime saving of critical materials, are these two semi-circular wood arches with 60- and 70-ft. spans, respectively. The 60-ft. spans have 26¾x8-in. glued laminations and the 75-ft. arches are similarly made up, using twenty-seven 1x8-in. pieces. Individual laminations in both arches are scarfed on 1 to 12 angles to give continuity that would not be obtained if the joints had been fashioned with customary square-end cuts.

Douglas fir, with moisture content of 10 to 12 percent and fiber stress of 1,600 lb. per sq.in., was used for the laminations which are fastened together with casein glue under a pressure of 100 lb. per sq.in. Arches were shop-fabricated, under controlled temperature and humidity conditions by Summerbell Roof Structures, Los Angeles.

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ONSTRUCTION MEN WANTED

FOR ARMY ENGINEER CORPS

he immediate response of construction men – with SPECIALIZED KNOWLEDGE – is vital to Amer- at this time. Says Major General Eugene Reybold, f of Engineers, "We're moving on to a program of truction overseas. We're in the middle of a big job – the job of helping to move men and equipment place for assault. We need men for this present job, ell as for the next job coming up – the attack itself."

o help on this job, all men over 18 years of age se experience has been on construction and with con- tion equipment are eligible for action in the Corps ngineers. The objective is to enlist 9000 specialists a th until further notice.

apid advancement in grade and the opportunity to nd Engineer Officer Candidate School are within the grasp of men with previous construction experience.

he training will be at one of the four engineer train- centers – Fort Belvoir in Virginia, Fort Leonard od and Jefferson Barracks in Missouri, Camp Clai- e in Louisiana.

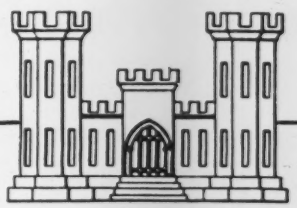
he Army Engineer Office nearest to you will accept application. If your qualifications are acceptable, will be provided with a letter to your Induction ter, ordering your assignment to duty with the Engi- s – to the work you know and like best.

HERE is an opportunity for experienced construction men to serve in the famous Corps of Engineers – to see action in a field for which they are specially fitted.

GO to your nearest Army Engineer Office.

GET assigned to duty with the Engineers.

Help Engineer American Victory.



TO EMPLOYERS: *Let the Army Engineer nearest your job tell your men how they can retain and develop their skills while they are in uniform.*

HIS MESSAGE IS CONTRIBUTED BY Engineering News-Record IN THE INTEREST OF AN ENGINEERED VICTORY

Copies are available for posting in the office or on the job

California beaches closed by sewage pollution

Formerly popular bathing beaches on the Pacific Ocean extending from Santa Monica some 10 miles south almost to Redondo Beach were all placed under quarantine on April 3 by the California State Board of Health because of sewage pollution. The area involved in the closing order includes beaches at Hermosa, Manhattan, El Segundo, Playa del Rey, Venice and Ocean Park. Most feared are epidemics of typhoid and dysentery.

The Board's order refers to laboratory studies and sanitation inspection made throughout 1942 resulting in findings that the degree of pollution is sufficiently dangerous to make it necessary to exclude the public from the shore waters and the beach up to the line reached by high tide, for that stretch of beach from Fourteenth St. north of the Hermosa Beach pier to Brooks Ave. north of the Venice pier. Picnicking above high tide mark is not banned but is "discouraged" because of sewage deposits washed up on the beach. City and county health officers are directed by the Board to post signs warning the public and to enforce the provisions of the ordinance establishing the quarantine.

Principal source of pollution is the mile-long hyperion outfall which leaks badly at the joints and is inadequate to handle sewage flows greatly increased by the influx into Los Angeles of great numbers of war workers and military personnel. Current report is that the area may remain under quarantine until escape of untreated sewage is prevented or an entirely new outfall and treatment plant can be built.

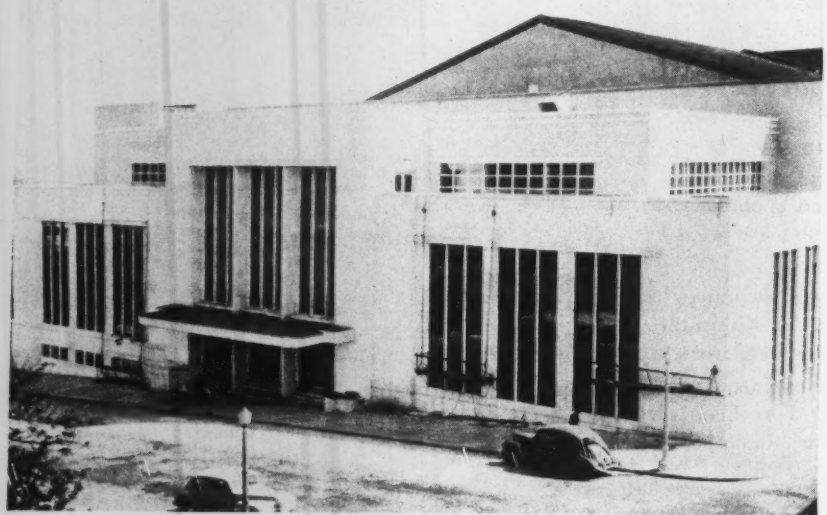
• • •

Additional work permitted at Gila and Grand Coulee

The War Production Board has amended a stop-construction order issued to the Bureau of Reclamation, to permit additional work on the Gila, Arizona, project.

The construction permitted by the new amendment is that which is necessary for the development of guayule and the leveling, irrigation and cultivation of approximately 3,000 acres adjacent to the Army Air Forces advanced flying school for the further purpose of dust control.

At the same time, revocation orders were modified to permit the Grand Coulee Dam project, Wash., to accept delivery of additional equipment such as rails, splice bars and rail clips. The amended stop-construction order of the WPB also permits construction of a road to replace one that was inundated by high water in the reservoir.



Atlanta's auditorium rebuilt without priorities.

Without requiring priorities for any critical materials, Atlanta, Ga., last month completed reconstruction of the front part of its city Auditorium. Destroyed by fire in 1940, this entrance was rebuilt of Georgia white marble at a cost of $300,000.

Fireproof construction was used throughout except for wooden doors and window frames. Installation of final fixtures involving critical materials for air-conditioning, elevators, chromium doors and metal windows is postponed for the duration. Robert and Co. were architect-engineers and the erection contract was by Flagler Co.

Texas senate attacks ... of Possum Kingdom po...

Charges that the present sale ... tric power from the Possum K... Dam is a "gross disregard of the ... interests of Texas", are being ... gated by a State Senate committee.

A resolution, submitted by me... of the Senate, charges that the ... River Conservation and Recla... District sold power to an electric ... mission co-operative at a yearly ... $84,000 less than that offered by ... vately owned public utility compa...

Included in the resolution ... charges that a bona fide offer of $2... per year by Texas Electric Servic... of Fort Worth, for the purchase of ... tric power had been rejected by ... directors of the district, who instead ... power to a newly formed non-profit ... poration known as Brazos River ... mission Electric Co-operative, Inc. ... $204,000 yearly.

The resolution also contained ch... that a large amount of the revenu... the Brazos River Conservation and ... clamation District is being drained ... and distributed to "a number of la... engineers, promoters and other per... connected in various ways with th... operative, under its present form o... tract.

It is further pointed out in the ... lution that excess power purchased ... the district by the co-operative is ... resold to a public utility for $300... year.

This sale, states the resolution, ... fers to the co-operative about $1... of annual revenue from power pro... in the operation of the Possum Kin... Dam; whereas such revenue was ... tended by law to be used to finance ... structures or pay for those already ... for control of floods of the Brazos ...

• • •

Camp Endicott Seabee... training center dedica...

More than 12,000 members of ... Seabees (Navy Construction Battal... and many civilians attended the de... tion of a new training center at N... ville, R. I., on April 4. The tra... center, which cost more than $20,000... was dedicated by Miss Grace End... of Paterson, N. J., who unveiled a pl... officially naming the camp in hono... her father, the late Rear Admiral ... decai T. Endicott, who was chief o... Navy's Bureau of Yards and Docks.

Nearly 10,000 men of the constru... battalions in final stages of training ... cuted Commando raids, gave demon... tions in the handling of ordnance, ... took part in pontoon work on the s... of Narragansett Bay.

Press Association, Inc.

Huge fighter plane base nearly ready to protect Washington area

... is a general view of the 4,700-acre ...lane base, described by the Army ...s as the largest of its kind in the ... It will be turned over to the Army ... 15 for use in fending off any possible ...cks on Washington, Baltimore and the Chesapeake Bay and Potomac River area. This is a $2,000,000 rush job, begun last summer and the project is nearly complete. There will be more than 4 miles of 150-ft. concrete runways and 14 miles of 50-ft. taxiways with accommodations for three squadrons.

Engineers in charge of the 7,500 men working on the job, officially known as Camp Springs Project, Meadows, Md., report that the planes would be dispersed and moored to rings sunk in concrete, the idea being that no one bomb could damage more than two ships.

...using projects help ...e building industry

...truction of housing units on a ...scale continues to be one of the ...t factors in keeping the building ...y alive during wartime. Typical ...oments of this kind recently ap- include these four:

...port News, Va.—The National ...g Agency has approved the im- ...e construction of 2,030 additional ...ly financed family units in this ... The agency reports that 1,000 ... will be located in Newport News ...cinity, and 1,030 in Hampton and ...y. Housing previously approved ...he Newport News area included ... family units and 1,400 dormitory ... for single persons.

... Orleans, La.—The National ...g Agency has approved construc- ...f 1,063 new houses at New Orleans. ...homes will be constructed with ...e funds under federal housing ...rity.

...niston, Ala.—Private construction ...0 new family dwellings and the ...rsion of 50 existing structures has ...approved by the National Housing ...nistration. This program is in addi- ...to the conversion of 45 dwelling ... in Anniston previously approved. ... this housing is intended for use by ...n war workers, largely employed ...e Anniston Ordnance Depot. These ...rs are brought into the area to ...ement local labor.

...ltimore, Md.—The City Plan Com- ...on has approved plans for the con- ...tion by the federal government of 400 negro housing units in the neighborhood of Frankfurst Ave. and Childs St., Fairfield. The structures will be of a temporary nature to be dismantled within three years after the war. The federal government proposes to build 1,400 more negro housing units in another section of the city if a suitable site can be found.

• • •

Cheap power causes boom in the Spokane area

As a result of Grand Coulee's cheap power, and with the protection of thousands of square miles of mountainous terrain to the west, the Spokane area in Washington has experienced extraordinary industrial and military developments. The Aluminum Co. of America and the Electro Metallurgical Co. have built and are operating in Spokane County large new plants which cost over $100,000,000, making Spokane an important light metals producing center almost overnight. In less than 12 months Spokane County's civilian population has increased by 21 percent and the number of its wage earners by 28 percent. For the first quarter of this year building construction in Spokane gained 95 percent over the preceding quarter.

In a year the second largest naval training station in the country, representing an investment of $45,000,000, has been built on Lake Pend Oreille, east of Spokane. Defense contracts let for the Spokane area total over $325,000,000, and it is said that several hundred millions more in contracts are soon to be let.

Added water facilities for Newport News area

Completion of a portion of supplementary mains for the transmission of water from the filtration plant at Lee Hall Reservoir to the municipal distribution systems serving Newport News, Va., and its vicinity has been announced by C. L. Vickers, assistant regional director of the Federal Works Agency.

The section completed is now serving water to Camp Patrick Henry, the embarkation camp near Oriana, Va. This camp will consume approximately 2,500,000 gallons of water per day when in complete operation. The pipe line is part of an extensive water supply system for which federal funds were allotted last year to provide additional water facilities for military personnel, the shipyards and civilian war workers in the Newport News area.

The section of pipe which was put in operation recently consists of approximately 35,700 ft. of 24-in. and 27-in. reinforced concrete pipe, which was laid in 12-ft.-14-ft. sections. The pipe was manufactured by the Lock Joint Pipe Co., of Ampere, N. J., at a plant which was set up near Oriana for that purpose. The remaining supplementary filtered water transmission lines under construction in the vicinity of Newport News, approximately 35,400 ft. of 24-in., 27-in. and 34-in. reinforced concrete pipe, will be in operation soon, Mr. Vickers said.

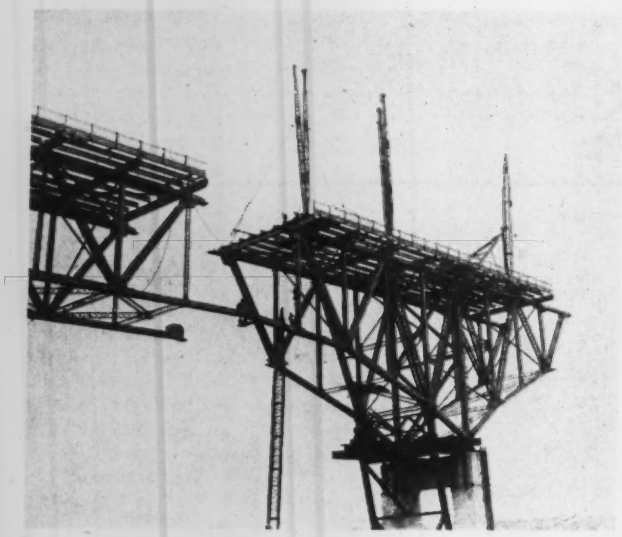
Newsom and Aldrich of New York are consulting engineers for the work. For design and construction details see *ENR* Oct. 8, 1942, p. 474.

Balanced Erection for New London Brid

Balanced and cantilever methods were used for erection of the recently completed 5,926-ft. long Groton-New London, Conn. bridge over the Thames River (*ENR*, March 4, 1943, p. 326). The structure provides two sidewalks and two 24-ft. wide roadways separated by a center mall. Main river crossing is a 1,245-ft. deck cantilever with 352.5-ft. anchor arms and a 540-ft. channel span of which 216 ft. is a suspended deck truss. Adjacent to each end of the main span are four 312.5-ft. deck trusses arranged in two-span continuous units. Deck plate-girders of varying span to conform to existing conditions complete the bridge, which is more than a mile long.

Erection was from each side of the river in three separate operations; erection of approach girders, continuous deck trusses and the main span. The girders were erected by a large crawler crane operating on the ground and raising the girders in sections. The rest of th ers were lifted into place by th and a deck traveler operating previously completed spans.

The four 312.5-ft. deck trusses end of the main structure, were by traveling derricks operating deck. Usual procedure was to ca out six panels, 186 ft., from one a falsework bent, and then to erection of the remaining four or 126.5 ft. also by cantilever



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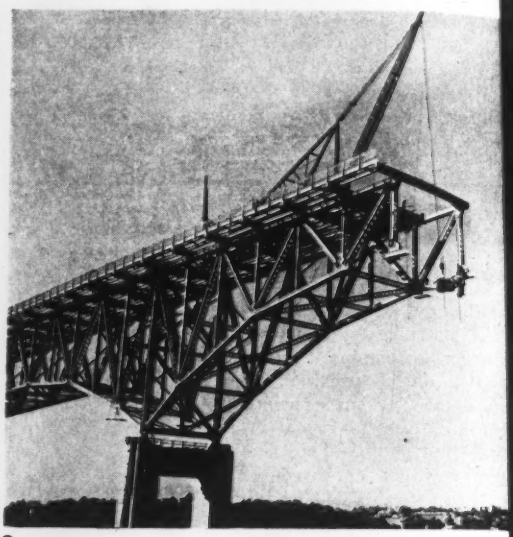

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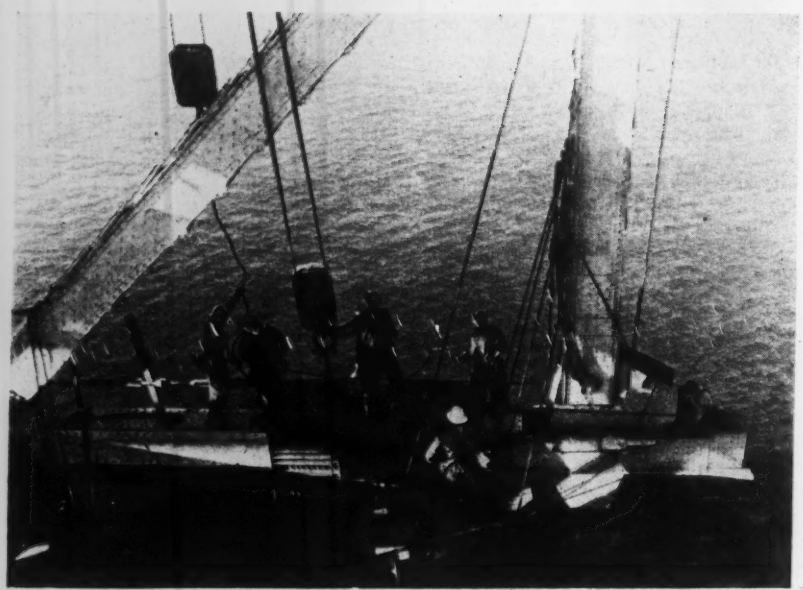
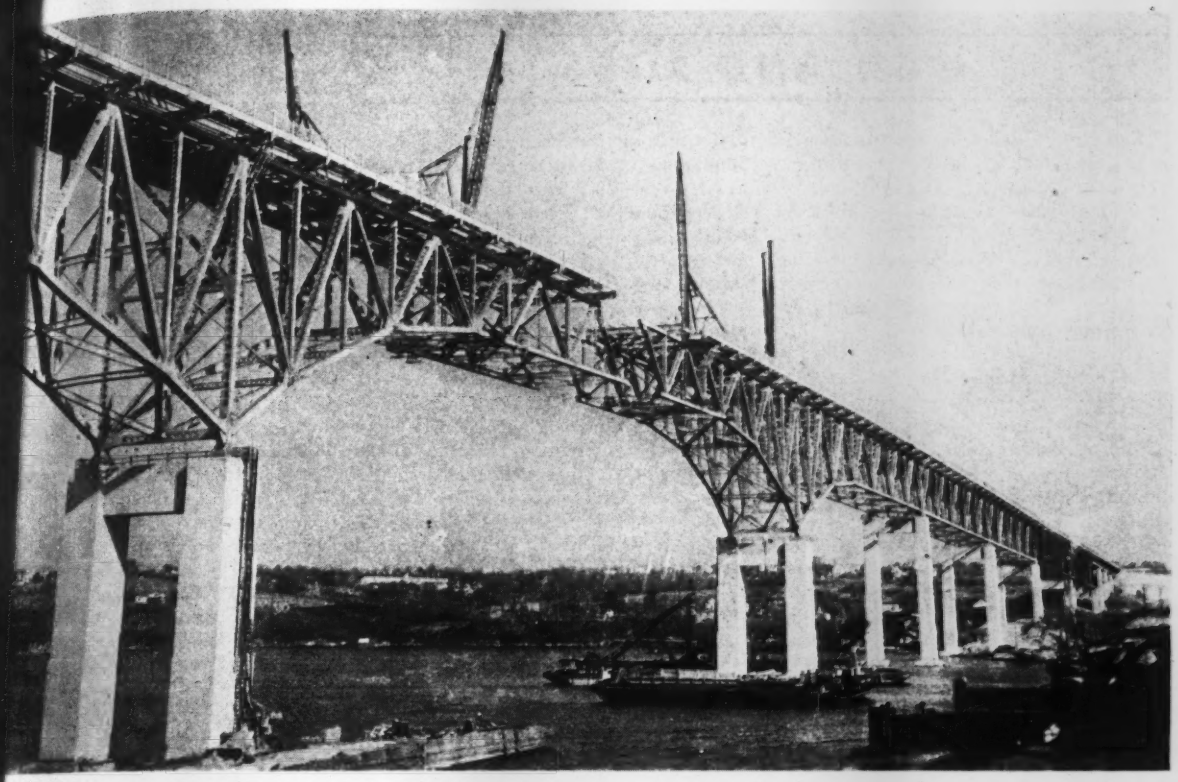


3

Fig. 1. Balanced erection over a main meet the cantilevered section of an arm of the Groton-New London Bridge tral guy derrick was first set-up on tform framed between an erection bent pier. As erection continued the der "jumped" to the deck to erect left s rick and right traveler.

Fig. 2. Traveler moves out over canti the main channel span. The main fall ing the jacking device for the suspende Similar jacking arrangements were pro the top chord at either end of the su span.

Fig. 3. Close-up of jack installation in Fig. 2. Two 300-ton hydraulic jacks closed in the temporary (bolted) stee ing above and below the main botto Pin with pilot nut and driving head may be seen just below the panel po



4. Suspended span approaching final closure. Right guy derrick was left in position to dismantle the two travelers and the small jinniwink rick used for placing the diaphragms and miscellaneous small members.

r the pier under the center of the span continuous units no additional l in the members was necessary to y the extended cantilevers. How-, at the simple support piers a pin he plane of the top chord and a ter in the plane of the bottom chord e used to permit continuous erection he steel.

Erection of each 352.5-ft. anchor arm tinued by the same cantilever thod and with the same equipment eight 27-ft panels. Over the main s erection was by the balancing and tileving shown in Fig. 1, the steel ex-ding to join the anchor arm five ft. panels away from the main pier. After closure of the balanced section the shoreward anchor arm, the tion of the 540-ft. channel span was ried on without falsework. The 216-suspended section is pin connected the top chord. During erection a vy member, and jacks for closure g. 3) took the compressive stresses the cantilevered portion of the sus-ded span. The corresponding top rd member took the tensile stress.

The bridge was built for the Groton-w London Bridge Commission. sign of the structure was done by the nnecticut State Highway Department which W. J. Cox is commissioner and L. G. Sumner bridge engineer. A. W. Bushell, now deputy commissioner, was in direct charge of the work, with W. G. Brenneke project engineer.

Parsons, Klapp, Brinckerhoff & Douglas were consultants to the Groton-New London Bridge Commission on design and construction and were represented on the work by Irvine P. Gould. During part of the erection Fay, Spofford & Thorndike were consultants to the highway department. For the latter firm R. E. Crawford was resident engineer.

The superstructure was fabricated and erected by Harris Structural Steel Co. of New York. R. Smith was superintendent and E. L. Gerber engineer on erection.

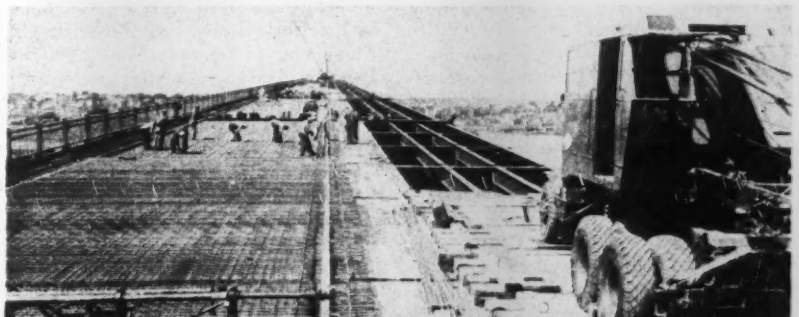


Fig. 5. Forms for the 7¾-in. thick concrete deck were carried on kneebraces supported on the lower flanges of the stringers. Approach concrete, supplied by a paver at ground level, was raised and placed by a truck crane. Truck-mounted mixers delivered most of the concrete for the central sections, a crane and bucket being used where trucking was prohibited.

MEN AND JOBS

Ernest P. Goodrich, consulting engineer, New York, has been named a member of the Price Adjustment Board of the U. S. Navy, with headquarters in Washington. Mr. Goodrich is no stranger to the Navy, having served for four years in the civil engineer corps at the Brooklyn Navy Yard soon after graduation from college.

George W. Howson, of Fresno, Cal., has arrived in Sacramento to make his headquarters there as new field coordinator of the Central Valley Project studies. Howson, who is a civil engineering graduate of the University of California, will coordinate work on the 24 basic problem studies launched last December to determine how the Central Valley Project may contribute to the development of California agriculture, industry and commerce.

William B. Goodwyn, of Montgomery, Ala., member of the bridge contracting firm of Goodwyn & Murphree, has been commissioned a lieutenant in the Navy and has left for a base in Virginia.

Armstrong Chinn, chief engineer of the Alton Railroad, Chicago, has been promoted to general manager of the railroad. He has served as chief engineer since 1929, coming to the Alton from the Chicago, Burlington & Quincy Railroad. Mr. Chinn has been succeeded as chief engineer by **Morris D. Carothers,** division engineer of the eastern division.

Leo Ihli, district engineer, with the South Dakolta State Highway Commission since 1937, has been given leave of absence to accept a commission as captain with the U. S. Marine Corps. He has been employed by the South Dakota State Highway Commission since 1919.

William Kenneth Dickson, civil engineer of Charlotte, N. C., who was chief of the quartermaster branch at Fort Bragg, has been promoted from lieutenant-colonel to colonel.

Scott P. Stewart, formerly director of the Utah State Securities Commission, and now a civilian engineer with the Army airbase at Salt Lake City, has been nominated by President Roosevelt to be register of the Land Office at Salt Lake City, succeeding A. S. Brown.

John C. Gearhart, until recently assistant engineer in the office of Stevens & Koon, consulting engineers, Portland, Ore., has been commissioned an ensign in the U. S. Navy, Civil Engineer Corps, and is now with the Seabees.

Capt. John H. Strange has been appointed assistant post engineer at Majors Field, Greenville, Tex. He was formerly city engineer at Waco, Tex. before entering the service. Captain Strange has also served at the air depot training station, Woodward, Okla., and as assistant post engineer at William Beaumont General Hospital, El Paso, Tex.

Lieut. Col. Ira F. Bennett, area engineer for the Oklahoma Ordnance Works, at Choteau, Okla., who has supervised construction of that $100,000,000 project since 1940, has assumed duties as United States engineer for the Charleston, S. C., district. He succeeds **Col. D. W. Griffiths,** who has been transferred to Jacksonville, Fla. **Lieut. Col. J. W. Patton** remains as Colonel Bennett's assistant.

Capt. Merle J. Senn, of the Army Corps of Engineers in charge of construction of the Des Moines ordnance plant since Feb., 1942, has been promoted to the rank of major.

A. J. S. Taunton has been made group captain and chief work's officer for the No. 2 Training Command, Royal Canadian Air Force. Captain Taunton is a veteran Manitoba engineer who built bridges in peacetime and has supervised the construction of 30 prairie air schools in the past three years.

John B. Huebner, former assistant engineer, U. S. Engineers, Little Rock, Ark., district, has been promoted from lieutenant to captain in the Army Air Corps. He is located at San Juan, Porto Rico, with the Antilles Air Task Force.

Two promotions have been announced in the Little Rock, Ark., district, U. S. Engineers, as follows: **First Lieutenant Paul W. Mason,** executive officer in the area office at the Pine Bluff, Ark., arsenal, to captain; and **First Lieutenant George H. Robinson,** area engineer at Camp Robinson, Ark., to captain.

Maj. L. L. Flint, who served as area engineer of army construction at Clinton, Iowa, has been made post engineer.

First Lieut. Rinard T. Largent, plans and training officer of the 303rd Engineering Battalion of the 78th Division at Camp Butner, N. C., has been promoted to the rank of captain.

Edward L. Whitton, of Charlotte, N. C., former vice president of the Southeastern Construction Co. at Charlotte, has been promoted to full lieutenant in the Navy. He is on duty at Pens... Fla., in the public works office of... naval air station.

Capt. Robert F. Ruffner, army... gional engineer, has moved his head... ters from Camp Sutton, Monroe, N. C... Charlotte, N. C. Army installa... under the supervision of this office... clude those at Greenville, Camp C... S. C.; and Camp Sutton, Morris F... the Charlotte Quartermaster Depot... the Sand Hill bombing range, N. C. C... tracts for all new construction pro... in the region will be handled in... future through the Charlotte office.

J. B. McClellan has resigned as... sistant sanitary engineer of the Kent... State Department of Health, to acce... commission as first lieutenant in... army sanitary corps.

Frank L. Couch has been appoi... assistant works engineer at the... Moines ordnance plant. Since mid-J... during construction of the plant, he... been resident administrator there... Smith, Hinchman & Grylls, Det... Mich., engineering firm, and for... Howard R. Green Co., Cedar Rap... Iowa. Couch has been in architect... and engineering work since 1924.

Dick Everds, formerly of the I... highway commission and recently... the Gibbs-Cook Tractor & Equipment... of Des Moines, has accepted a position... superintendent of construction for... W. B. Linnan Co. for work on the A... Highway.

Charles E. Feltner, of Raleigh, N... who graduated from Virginia Polyte... nic Institute in 1928 with a degree... civil engineering, and later took a... tional engineering courses at the U... versity of North Carolina, has just be... promoted to the rank of captain at F... Moultrie, S. C., where he is a C... Artillery battalion commander. He... entered the army in December 1... after having served in civilian life... engineer for the Curtiss Aircraft C... and as a teacher of civil engineering...

Robert Alexander Harris, chief en... neer of the state highway commission... Mississippi, since 1934, has been co... missioned lieutenant commander in t... U. S. Navy, and has reported to W... liamsburg, Va., for training preparat... to overseas service. He has been w... the highway department for 23 yea...

George M. Fowler, design engine... and Harry C. Davidson, chief survey... for the Widner Engineering Co. of S... Louis, Mo., have been transferred to O... lahoma to design and supervise constru... tion on a large housing project.

lavy's four year engineering course overs broad range of subjects

ch college will determine for itself courses to be offered, will oose its own textbooks, and will give its own examinations

ndidates for commissions in the Civil Engineer Corps who take the ing course set up by the Navy as art of the Army-Navy college train- program will receive a well-rounded year course not differing greatly the courses offered by engineering ols in peacetime. This was revealed the publication of the Navy catalog ubjects for the courses.

EC candidates will receive a course ght sixteen-week semesters in one of mber of colleges selected for engi- ing training. Each college will estab- for itself the detailed content of the ses and choose its own textbooks. colleges, too, will set their own ex- nation, except that the Navy will run heck examination occasionally. Col- s are encouraged to give credits to- d a degree to students taking the se.

There are no elective courses, except that students who have already covered any of the subjects may arrange substitutions. The first year's studies will cover mathematics, English, historical background of the war, physics, engineering drawing, and Naval organization. In the second year, the student will study calculus, chemistry and engineering materials, analytical mechanics, surveying, Navy history and strategy, and psychology.

Third-year courses include thermodynamics, electrical engineering, strength of materials, fluid mechanics, curves and earthwork, and structures. The fourth year covers structures, sanitary engineering, water supply, contracts and specifications, soil mechanics, engineering reports, airport design, industrial organization, highway engineering, and economics of engineering.

uers new head of Springfield water service

Harry B. Luers, commissioner of fi- ce of Springfield, Ill. for the last 16 rs, took over the responsibility for the water light and power department April 13. This action followed defeat the April primary of Willis J. Spauld- who for 34 years had served as Com- sioner of Public Property.

Mr. Spaulding's hope in running again office, it is said, had been to establish on-political board to have control of municipally-owned water and power nts.

Louis Lush, who had been serving as engineer when he took over as Com- sioner of Streets upon the death of mmissioner Percy Darling last Decem- has been reappointed engineer.

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Lumber needed for 1943 eleven billion board feet

Lumber requirements for new construc- in the United States in 1943 will l approximately 11 billion board feet, as been announced by the War Pro- tion Board. The total for construction l for all other uses will approximate 500,000,000 b.ft.

The lumber consumption estimate, ich includes that which may be re- ired by this country for use outside the United States, was prepared by War Production Board and the U. S. partment of Agriculture Forest Service. It includes lumber to be used in boxing, crating, factory, and construction, as well as for military uses. The present forecast provides for prospective construction under severe limitations and does not provide for any unusual catastrophe or for replenishing depleted stocks. Since lumber stocks are at the lowest point in several years, it is not at all certain that production will be high enough to enable consumers of lumber for war purposes to get what they need during the year. While active steps are being taken to increase production so that the major war consumers can be assured of their requirements, consumption of lumber must be limited to actual production.

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Rawn appointed to WPB sanitation section post

A. M. Rawn, general manager of the Los Angeles County Sanitation District has been appointed chief of the new Sewerage and Sanitation Section established by the governmental division of the War Production Board.

Establishment of the new section, as outlined in "*ENR*," April 1, p. 449, is designed to expedite priorities assistance for public sanitation facilities. Mr. Rawn, a director of the American Society of Engineers, has long been identified with sanitary engineering activities. Early in the war program he was on leave of absence to assist in the design of army camp facilities.

Work to be resumed on REA projects

Thirty-two Rural Electrification Administration projects stopped by the War Production Board on July 21, 1942, have been re-examined in the light of current farm needs for power and will be completed as rapidly as possible, WPB chairman Donald M. Nelson has announced. The deciding factors in favor of reinstating the projects, according to Mr. Nelson, were that they will permit electric service to 6,700 farms when completed and that most of the necessary material already is on hand or can be obtained from certain available excess stocks.

The projects now average 71 percent complete, varying individually from 50 to 89 percent of completion. About $1,800,000 had been invested in them to the time work was halted; expenditure of another $800,000 will complete all 32 projects. The construction involves about 2,900 miles of line.

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Waterworks and sewer projects are halted

Waterworks and sewer facilities projects located in seven states and Alaska were halted April 8 by the Office of War Utilities of the War Production Board to prevent undue drain on critical materials. Seven of the projects were part of the program of the Federal Works Agency, which concurred in the revocation of preference ratings. In none of the cases had construction activities actually been started.

The projects are located as follows: Anchorage, Alaska; Eastport, Md.; Colp, Ill.; Medina, Tenn., and Radcliff, Colo.; Tuskegee, Ala.; Valdosta, Ga., and Portsmouth, N. H.

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Price control exemptions for constructors

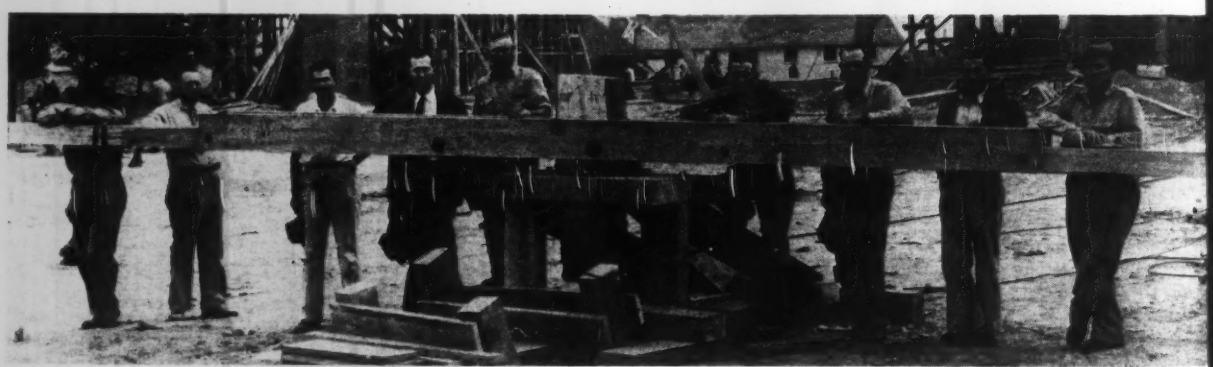
Most parts of the construction industry not already exempt from price control soon will be removed from that regulation, Price Administrator Brown has announced. Remaining under control will be repair services, sheet metal work, the sale of goods such as roofing, and the sale of building materials. The total volume of construction in the United States declined 14 percent from December to January as the downward trend continued for the fifth successful month. Insured mortgage financing for 90,000 additional units of private war housing has been made available through amendments to the National Housing Act.

MEN AT WORK

Engineers playing an important part in design, construction and maintenance of highways and bridges in Allegheny County, include men above. They are, left to right: C. K. HARVEY, office engineer, department of works; PARK H. MARTIN, chief engineer, county planning commission; JOHN B. SWEENEY, assistant director, department of works, and LEVI BIRD DUFF, chief engineer, department of works. Mr. Sweeney, in absence of Director John F. Laboon, now a lieutenant colonel in the Army, is acting director of the department of works.

Two engineers considered oldtimers at th Rock Island, Ill., District, U. S. Engineers, an the two above. They are, left to right: E. J SNOW and A. P. RINELL. Civil engineerin graduates of Illinois and Purdue, respectively they went to Rock Island soon after leavin college.

Col. H. D. VOGEL, (left), district engineer, U. S. Engineers, Pittsburgh, receives from Capt. W. I. ENGLISH, in charge of district's war savings bond campaign, Minute Man flag. Delivery of flag by Captain English, head of the engineering division, signified 90 percent of the district employees were buying bonds.



On a southern project J. A. Jones Construction Co., Charlotte, N. C., used job-made capstans to raise 120-ft. timber trusses. Company engineer in charge included, left to right above: J. D. CRENSHAW, rigging foreman; W. L. WISE, general superintendent; C. E. LAWRENCE, expediter; J. WATSON, project manager; R. L. TROUTMAN, foreman; R. R. CRAIG, superintendent; D. A. TEEL, foreman; A. C. BALL, expediter; an C. D. WEEKS, foreman.

nadian provinces agree a big power program

al approval was given recently to greement between the Canadian nces of Ontario and Quebec which permit immediate development of ional power on the Ottawa River, forms part of the boundary be- the two provinces. The final step passage of an act by the Ontario ature authorizing further develop- of the river's water power resources an agreement between representa- of the two provinces that was d sometime ago. Quebec already pproved the agreement.

is now expected that the Ontario o-Electric Power Commission will work in the near future on a 00,000 water-power development be- Pembroke and Mattawa.

der the new agreement, instead of rtaking a joint development of each r site, as was done at Chats Falls, irst major power development on the wa, full power development rights e Carillon site, which is near the center of Quebec, will be trans- d to that province as will rights to Rocher Fendu site. Ontario is ted development rights at the aux site, at Des Joachim Rapids at Cave and Fourneaux Rapids. Paquette Rapids site where there large island in the river, will be loped jointly by the two provinces.

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U. S. shipbuilding broke all records in 1942

he Maritime Commission reports that United States shipbuilding industry 1942 broke every world record for me of shipbuilding, turning out a l of 8,090,800 deadweight tons of rchant shipping. The 1942 total in- des 542 Liberty-type vessels, 62 tank- 5 ore-carriers, 62 long-range C-type s, 55 cargo carriers for the British, oastwise ships and 15 special type t. In addition, some 800 smaller craft other vessels were delivered to the y and Navy. The goal set for 1943 9,000,000 deadweight tons.

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Urban building declines for 12 consecutive months

he dollar value of building construc- started in urban areas of the United tes in February was 73 percent less n the total for February last year marked the twelfth consecutive nth of declining valuations, Secretary rkins has reported.

The decline in the value of contracts arded for federally-financed building projects matched the drop in the value of permits issued to private builders. Valuations for all new non-residential buildings dropped 82 percent, new residential construction valuations declined 66 percent and the value of additions and repairs went down 44 percent. The February figures marked a decline of 26 percent from January, due chiefly to a reduction of 38 percent in the value of federal contract awards.

WASHINGTON HIGHLIGHTS

INCLUSION under the renegotiation law of contracts or sub-contracts held by construction firms building war plants for the Defense Plant Corporation is suggested by the Truman Committee of the Senate in its report on renegotiation of war contracts. This provision, however, is not included in the legislation introduced recently at the committee's request. The pending bill would raise to $500,000 the minimum of work which a contractor must do in a year to be subject to renegotiation. It would also require that all firms subject to renegotiation file financial data with the procurement agency; then if renegotiation is not initiated within a year, they would no longer be subject to renegotiation.

WPB APPROVAL has been granted for construction of the second leg of the second Texas-East Coast oil pipeline. A 24-in. crude line from Texas to Indiana is now complete, and a second 20-in. products line is under construction. Also under construction is a 24-in. crude line from the Midwest to the East Coast; as soon as this is finished work will start on the newly-approved 20-in. line to the coast. Meanwhile, Petroleum Administrator Ickes is already asking priorities on a third pipeline from Texas to the coast.

JOHN H. THOMSEN has been appointed head of a new water supply and equipment branch of WPB's Farm Machinery and Equipment Division. Thomsen has been associated with the Dempster Mill Manufacturing Co. of Beatrice, Neb.

FEDERAL AID in freeing of toll bridges would be extended to 1944 by a bill introduced last week by Representative Robinson. The bill would continue the usual 50 percent federal contribution and would also provide for use of wartime federal condemnation powers in cases where a state is unable to obtain possession of a bridge.

Big housing project for western ship workers

What is reported to be the largest number of government housing units to be built under a single contract in the West was awarded a few weeks ago to the Robert McCarthy Co., general contractors of San Francisco, on their low bid for 3,990 family apartments for the accommodation of the employees of the Richmond Shipbuilding Corp., Calif.

The contract, in excess of $6,000,000, calls for 285 two-story buildings, each containing 14 apartments having a combination living room-bedroom, kitchenette and bath. The buildings will be near the shipyards.

The architectural and engineering work was done under the direction of Einar T. Larsen, chief engineer for the Richmond Shipbuilding Corp., assisted by Morris Wortman. The project was sponsored by the U. S. Maritime Commission.

The Robert McCarthy Co. is now finishing 1,800 apartment units in Richmond, Calif.

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State bridge tolls help pay school taxes

Under a new law in New York State, taxpayers of School District 5 of the Town of Cortlandt, Westchester County, have shifted part of their tax burden to the New York State Bridge Authority, thereby setting a precedent with sweeping implications for other communities in which foundations for state-owned bridges are located.

The eastern abutment of the Bear Mountain Bridge across the Hudson River rests in the soil of this particular school district. While the bridge was privately owned the school district received the benefit of taxes based on an assessed valuation of $630,000. When the state purchased the bridge in 1940 for $2,275,000, the flow of tax money stopped and residents of the district found their tax rate jumping from $13.10 to $17.38 per $1000 assessed valuation.

Under the new law, the residents of District 5, which is crowded with tax exempt property, including ten cemeteries, establishments of various religious orders and 2500 acres of Camp Smith, will have their tax rate cut back to the original figure and the State Bridge Authority will foot the bill, probably with toll receipts.

A $100,000 track extension and improvement program at the Union Station, in Memphis, Tenn., has been announced on behalf of the five participating railroads that use the station.

WPB suggests conversion of idle cement mills

Manufacturers of cement have recently received a letter from Francis A. McAdam, chief, Concrete Materials Section, War Production Board, pointing out the possibility of converting any idle facilities that they may have to other war uses. Nodulization or agglomeration of iron ore for open hearth and blast furnaces, production of sponge iron or pig iron, calcination of petroleum coke, dolomite and limestone, drying and calcining of bauxite, clay, manganese ore, phosphate ore, etc., are mentioned. It is also pointed out that in some of these processes, crushing, grinding and flotation equipment, as well as wet or dry classification machinery, may also be called for.

Reason for the suggestion, states the letter, is that "as we get further into the year 1943, cement demand will be at about 50 percent of potential capacity."

In the event that a cement manufacturer is interested, it is suggested that he advise the Concrete Materials Section of the Building Materials Division of WPB as to what idle equipment he has to convert.

The WPB is also interested in locating available second-hand kilns, to answer inquiries it is receiving concerning this type of equipment.

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Tons of maps produced by Army Engineer Corps

The war has made maps more important than ever before as an aid to strategists, field commanders, navigators, and even the doughboy in foreign lands. That is why the map service branch of the U. S. Army Engineer Corps has grown from a skeleton force making a comparatively few maps to a huge organization producing tons of maps. Before the war there were only 65 employees in the main Washington office. Now, however, the St. Louis office alone employs nearly 500 persons.

The maps which the engineers make range from overall maps used in broad strategy down to detailed maps of a small area, showing every tree, house, abandoned well and wooded area. The location of a house, for instance, might be highly important in a Commando-type raid. Lieut. Andrew McNally, in charge of the St. Louis office, says: "Because of the speed and type of modern warfare, maps in this war are necessarily larger. A bomber going on a raid would not want to be switching maps every few miles. A map is needed to cover the entire flight. Mechanized troops must have maps of larger areas, too, because they cover more territory than do foot soldiers."

JOBS OF THE WEEK

IMPROVEMENTS, Texas
Bureau of Yards & Docks, Navy Dept., Washington, D. C., improvements at N... Air Station, awarded to Brown & Root, Inc., W. S. Bellows Construction Co. ... Columbia Construction Co., Corpus Christi, $5,782,500.

SHORE FACILITIES, Virginia
Doyle & Russell, Richmond, Va., have been awarded contract for shore facili... by Bureau of Yards & Docks, Navy Department, Washington, D. C., $1,675,000.

HOUSING, Spokane, Wash.
Spokane Homes, Inc., Seattle, Wash., will construct 299 homes in area bound... by Rowan, Wellesley, Ash and Belt Sts., by day labor. $1,500,000.

WAREHOUSES, Washington
U. S. Engineers, Seattle, Wash., awarded contract warehouse, shed and sto... facilities, Spokane, Co., to Sound Construction & Engineering Co. and Ford ... Twaits Co., Seattle, $1,000,000-$3,000,000.

ROAD, Florida
State Highway Department, Tallahassee, Fla., awarded contract for 42 miles Ov... seas Highway, Monroe County, to Groves, Lundin & Cox Co., Minneapolis, Mi... $1,396,916. J. H. Dowling, Tallahassee, is chief engineer.

IMPROVEMENTS, Maryland
Bureau of Yards & Docks, Navy Dept., Washington, D. C., awarded contract ... improvements at Naval Air Station, Patuxent River, at Cedar Point, to Con... dated Engineering Co., Inc., Baltimore, Md., $14,664,800.

STEEL PIPE LINE, Ohio
East Ohio Gas Co., J. F. Robinson, Pres., East 6th and Rockwell Ave., Cle... land, awarded contract for laying 119.9 mi. of 20 in. steel pipe, from Maum... Lucas County, to Brush Farm Station, Summit County, to Holland Construct... Co., Tulsa, Okla. Estimated total cost $3,254,000. G. Horsley is company engin...

BUILDING, Washington
U. S. Engineers, Seattle, Wash., awarded contracts miscellaneous buildings, Gr... Co., to Clyde M. Ludberg Co., Spokane, $1,000,000-$3,000,000.

CLEARING, GRUBBING, etc., Michigan
U. S. Engineers, Detroit, awarded contract to Julius Porath & Son Co., Detro... for clearing, grubbing, cutting trees, removing stumps, excavation, grading, c... crete or vitrified clay pipe, seeding, etc. in Macomb Co. at $1,000,000-$5,000,000.

HOUSING, Pennsylvania
John W. Harris Associates, Inc, New York, N. Y., awarded contract housi... roads, paving, water supply, North Strawbridge Twp., by Defense Plant Co... Estimated cost $1,000,000.

BUILDINGS, California
Zoss Construction Co., Los Angeles, Calif., lowest bidder building and facilit... Los Angeles Co., when U. S. Engineers, Los Angeles, Calif., opened bids. Es... mated cost is over $1,000,000.

RESIDENCES, Lodi and Hasbrouck Heights, N. J.
Grandview Court Homes, 140 Knickerbocker Rd., Dumont, will construct one hu... dred fifty residences by separate contracts. Estimated cost $1,000,000. Percy Sim... Teaneck, N. J., is architect.

IMPROVEMENTS, California
Pittsburgh Des Moines Steel Co., San Francisco, Calif., has been awarded co... tract by National Advisory Committee for improvements, Ames Aeronautical La... oratory, Moffett Field. Estimated cost $3,500,000.

BUILDING, West Virginia
U. S. Engineers, Pittsburgh, Pa., awarded contract for buildings and utilit... Berkeley County, to F. & Y. Building Service, Columbus, Ohio, $500,000- $1,000,0...

WARD BUILDINGS, Michigan
U. S. Engineers, Detroit, Mich., awarded contract two ward buildings a... sprinkler system, Chippewa County, to A. H. Proksch, Iron River, Mich. Es... mated cost $1,000,000.

Note—Additional bidding and contract news on many projects large and small appear in the Construction News section beginning on page 15.

Action on the Postwar Front

nomic and business plans for the postwar period continue to occupy the ion of many public officials, engineers and governmental agencies. Latest pments on this front include the following:

a two-day, twelve-state conference stwar problems, held in New York n April 9 and 10, Governor Thomas wey of New York, and the chief tives of other leading eastern states for a return to the states of powers ed to the Federal Government in rosecution of war as a primary need ostwar recovery.

ernor Dewey declared the state's concern must be "To reverse the ionary trend as exemplified by the ng exercise of total power over problems by the national govern-

Governor Herbert R. O'Connor of land asserted federal encroachment be stopped "only if the states justi- their existence by measuring up to equirements of this crisis." To this he said the states must begin plan- now to cushion postwar unemploy- He suggested a wide variety of rs that might be included in post- programs. Among these were a public works program, education, utilization, conservation and devel- nt of mineral resources.

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ly by accepting the fullest respon- ty for leadership in the international that is certain to exist after the can the United States assure per- nt peace and progress both for itself the other war-devastated nations. is the opinion of Eric A. Johnston, dent of the Chamber of Commerce of United States, as expressed to more a thousand of Chicago's industrial business leaders at a meeting spon- by the Chicago Association of merce on April 5. Mr. Johnston that the new frontiers of production, ibution, transportation and construc- that the war will open in America be duplicated in other nations, ting new avenues for development progress under American leadership guidance in Europe, Africa, South rica and China.

Postwar public construction is being ected here and there but, taking the ntry as a whole, very little has been e to translate paper proposals into stone, concrete, and jobs," said or General Philip B. Fleming, Fed- Works Administrator, in a recent morandum to the press. "This is the step that must be taken," General ning said. "Whether it is to be di- ed by the federal government, or by states and municipalities, is less im- tant than that it should be done, and done now. There are some, of course, who tell us that this is not the time to bother about the future; that the only thing we should think about now is the winning of the war, after which the future will take care of itself. That was the mistake we made the last time. Unfortunately, the war and the peace that is to follow it are not separable, and unless we concern ourselves now with the sort of world we want to live in hereafter, our wartime sacrifices may prove to have been in vain."

Shortly after President Roosevelt had put the entire responsibility of postwar planning squarely up to Congress, the Senate, without debate, created a committee to start immediate plans for the social and economic cushion necessary to protect the country against the slacks and let-downs of the postwar era. The new committee has broad investigatory powers for fact finding and is clothed with the authority to subpoena witnesses and documents. Comparable action by the House is expected, but it is doubtful if any action will be taken by Congress at this session.

It was after a conference with the members of the National Resources Planning Board, whose reports on security, work relief and postwar planning he had already submitted to the Congress, that the President stated that the responsibility for continued planning and the methods used rested entirely with Congress. For example, he said, the board listed $7 billion worth of public works to take up unemployment which would affect a great many persons upon demobilization and the closing of war plants, but that only $1 billion were advanced to the blueprint stage so that operations might start when the need arises.

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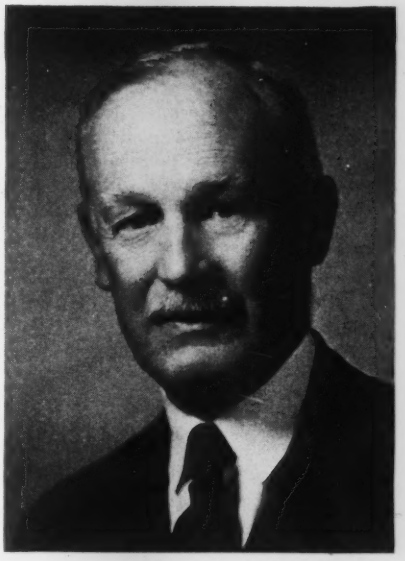
Army not responsible for roads outside of camps

Attorney General Guy H. Herdman, of Kentucky, told Kentucky county officials recently that they should grin and bear it if county roads are damaged by army mechanized equipment used in maneuvers. Mr. Herdman added, "The county should look at the matter philosophically. It is like an individual in this matter, it must do what it can to promote the war." Mr. Herdman said the army is responsible for road maintenance within the camp, but roads outside the camp are still county roads to be maintained by the county.



Boston civil engineers elect Turner president

Howard M. Turner, Boston consulting engineer, who has been identified with important public utility hydro-electric developments and other engineering undertakings, has been elected president of the Boston Society of Civil Engineers.

Mr. Turner was graduated from Harvard University in 1906, receiving an engineering degree from the university a year later.

After three years with the Turner Construction Co. in New York, and a short period as resident engineer of the Easthampton, Mass., Gas Co., he served for six years as hydraulic engineer for the Turners Falls, Mass., Gas & Electric Co. From 1919 to 1921 Mr. Turner was a member of the consulting firm of Turner, Millspaugh & Safford, Boston. Since then he has been in private practice under his own name, specializing in water power and other hydraulic work. For 20 years he has been a lecturer at Harvard University on water power engineering.

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Harold M. Lewis takes New York City post

Harold M. Lewis, consulting engineer in the field of city and regional planning, has been appointed to the post of consulting engineer, office of the president, borough of Manhattan, New York City. For over 20 years he was in charge of all engineering and other technical studies of the regional plan of New York and its environs, but resigned his position as consultant to the Regional Plan Association in order to accept this city appointment.

OBITUARY

Julien Wood, 79, Edenton, N. C., died March 17. He was chairman of Chowan County Board of Commissioners and a member of the North Carolina State Highway Commission from January 1935 to July 1937.

Jesse B. Holly, civil engineer, died March 17 in Hayward, Cal. He served as city engineer of Hayward from 1917 to 1932 and continued to practice as a civil engineer until his death.

H. Myers Parrish, 24, died at Lake City, Fla., March 22. Mr. Parrish was with the federal government in the U. S. Engineer Department.

Allen Sheldon Lozier, civil engineer, died March 28 at Berkeley, Cal.

George Turnbull, pioneer building contractor of New Westminster, B. C., died March 6 at the age of 87.

DeWitt Clinton Fenstermaker, 69, formerly a district engineer of the Chicago, Milwaukee, St. Paul & Pacific R. R., died at his home in Itasca, Ill., April 6. He retired in 1937 after 26 years' service with the railroad.

Harry R. Safford, 68, Houston, Tex., senior executive assistant to the president of the Missouri Pacific Railroad, died at Hot Springs, Ark., April 10. Mr. Safford joined the engineering department of the Illinois Central Railroad in 1895, advancing to chief engineer of maintenance of way in 1909. He was chief engineer of the Grand Trunk Railway from 1911 to 1918 and assistant regional director of the United States Railroad Administration from 1918 to 1920. Mr. Safford was a member of the American Society of Civil Engineers and had been president of the American Railway Engineering Association, counselor of the Engineering Institute of Canada and president of the Houston Chamber of Commerce.

Walter G. Filer, 70, widely known San Francisco mining and civil engineer, died in San Francisco March 4. Included among Mr. Filer's notable achievements was the building of the Manila Street Railway and the great dam at Twin Falls, Idaho.

Walter C. Polk, 74, retired telephone construction engineer, died April 5 at Asheville, N. C. Mr. Polk was an engineer for independent telephone companies, and for many years was connected with Theodore Gary & Co., at Kansas City, Mo.

Clarence A. Washburn, 61, supervising engineer for the Lake City ordnance plant at Lake City, Mo., died April 4.

Thomas C. Taylor, 72, retired civil engineer of Seattle, Wash, died in that city March 24. Mr. Taylor was one of the chief engineers on the Great Northern Railroad tunnel built under Seattle.

Thomas H. Byrne, county engineer of Carleton County, Ont., and a lifelong resident of Ottawa, died there April 3.

William E. Pease, 68, chief engineer in the construction of the Cleveland-Shaker Heights rapid transit line, the Cleveland union terminal and the 705-ft. terminal tower in Cleveland, O., died March 31.

Connecticut highway jobs stopped by WPB

The War Production Board has ha three highway construction project Connecticut totaling $813,000. In re ing priority ratings, the WPB explai that relocation work was a desir long-term improvement but not esse to the war effort. The projects con the relocation of Route 84 and incl three miles of concrete pavement, gr ing and construction of drainage st tures on the Groton-Old Mystic Roa bridge approach at Groton and the c struction of one mile of concrete pa ment and a reinforced concrete bridge another part of the relocating of Ro 84.

CONTRACTS AND CAPITAL

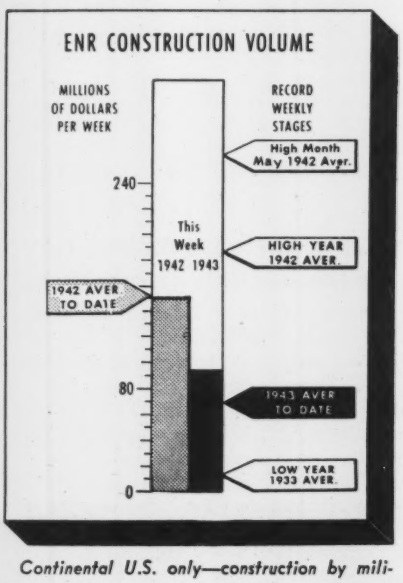
CIVIL ENGINEERING construction in continental U. S. for the week totals $93,573,000. This volume, not including the construction by military combat engineers, American contracts outside the country, and shipbuilding, is 0.3 percent below the preceding week, and 37 percent under the corresponding 1942 week.

Public construction tops last week by 1 percent, but is 39 percent lower than last year. Private work is 8 and 20 percent lower, respectively, than a week ago and a year ago.

The current week's construction brings 1943 volume to $1,087,844,000, an average of $72,523,000 for each of the fifteen weeks. On the weekly average basis, 1943 volume is 53 percent below the $2,495,145,000 reported for the sixteen-week period last year. Private volu $119,531,000, is 44 percent under a ye ago, and public construction, $9 313,000, is down 54 percent when a justed for the difference in the numb of weeks.

In the classified construction grou gains over the preceding week are sewerage, streets and roads, and uncla fied construction. Increases over t 1942 week are in commercial build and unclassified construction.

New capital for construction purpo for the week totals $1,258,000, and made up entirely of state and munici bond sales. The week's new financ brings 1943 volume to $468,146,000 the fifteen weeks, a total 79.5 perc below the $2,435,189,000 reported the sixteen-week period in 1942.



Continental U.S. only—construction by military combat engineers, American contracts outside U.S., shipbuilding not included.

CONTRACTS

Continental U. S. Only
(Thousands of dollars)

	Week Ending Apr. 16 1942	Apr. 8 1943	Apr. 1943
Federal	$127,172	$76,090	$73,2
State & Municipal	7,631	5,778	8,2
Total public	$134,803	$81,868	$82,5
Total private	13,774	11,973	11,0
TOTAL	$148,577	$93,841	$93,5
Cumulative 1943 (15 weeks)			$1,087,8
1942 (16 weeks)			$2,495,1

Note: Minimum size projects included are Waterworks and waterways projects, $15,0 other public works, $25,000; industrial bui ings, $40,000; other buildings, $150,000.

NEW PRODUCTIVE CAPITAL

	1942 16 weeks	Cumulative 1943 15 wee
NON-FEDERAL	$210,234	$67,7
Corp. Securities	71,160	2,2
State & Mun.	115,760	60,9
R.F.C. loans	23,314	1,5
FPHA loans	.....	3,1
FEDERAL	$2,224,955	$400,2
TOTAL CAPITAL	$2,435,189	$468,1

ENR INDEX NUMBERS

Index Base = 100		1913	192
Construction Cost	Apr. '43	288.80	138.5
Building Cost	Apr. '43	227.50	122.9
Volume	Mar. '43	228	100

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